

21. A method, using a computer system, for evaluating debtor risk based on calculation of consumer prepayment scores, comprising:
storing demographic information in data storage;
calculating a prepayment score using a system configured to calculate a prepayment score based at least in part upon said demographic information; and
evaluating debtor risk based on the prepayment score.
22. The method of claim 21, wherein said demographic information relates to applicant information from consumer applications.
23. The method of claim 22, wherein said applicant information relates to applicant names, addresses or social security numbers.
24. The method of claim 21, wherein said demographic information relates to prepayment historical data of consumer demographic groups.
25. The method of claim 21, wherein said demographic information relates to econometric historical data of consumer demographic groups.
26. The method of claim 25, wherein said econometric historical data includes information related to age, income, credit rating or occupation.

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27. The method of claim 22, wherein said applicant information includes demographic applicant information on a granular or individual level.

28. The method of claim 22, wherein said applicant information includes demographic information on a pooled or blocked level.

29. The method of claim 27, wherein said applicant information includes applicant names, addresses, social security numbers or other information.

30. The method of claim 21, wherein said prepayment score is based at least in part upon information related to applicant age, income, credit rating or occupation.

31. A system for evaluating debtor risk based upon calculation of consumer prepayment scores, comprising:

a data storage device having demographic information;

a prepayment calculation server configuration to calculate a prepayment score based on the formula

$$Score = \sum_T TP(T)$$

wherein T represents time and P represents prepayment;

wherein P is based at least in part upon said demographic information;

whereby debtor risk can be determined based on the prepayment score.

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32. The method of claim 31, wherein said demographic information relates to applicant information from consumer applications.

33. The method of claim 31, wherein said demographic information relates to prepayment historical data of consumer demographic groups.

34. The method of claim 31, wherein said demographic information relates to econometric historical data of consumer demographic groups.

35. The method of claim 31, wherein said demographic information includes demographic information on a granular or individual level.

36. The method of claim 31, wherein said demographic information includes demographic information on a pooled or blocked level.

37. A method for evaluating debtor risk by calculating consumer prepayment scores, comprising:

obtaining consumer demographic information;
calculating a prepayment score using a system configuration to calculate a prepayment score based on the formula

$$\text{Score} = \sum_{\text{T}} \text{TP}(\text{T})$$

wherein T represents time and P represents prepayment based at least in part upon said demographic information; and evaluating debtor risk based on the prepayment score.

38. The method of claim 37, wherein said demographic information relates to applicant information from consumer applications.

39. The method of claim 37, wherein said demographic information relates to prepayment historical data of consumer demographic groups.

40. The method of claim 37, wherein said demographic information relates to econometric historical data of consumer demographic groups.

41. The method of claim 37, wherein said demographic information includes demographic information on a granular or individual level.

42. The method of claim 37, wherein said demographic information includes demographic information on a pooled or blocked level.

43. The method of claim 37, further including calibrating an appropriate price for a loan based on said prepayment score.

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44. The method of claim 37, further including using the debtor risk evaluation for marketing.

45. The method of claim 37, further including using the debtor risk evaluation for underwriting.

46. The method of claim 37, further including using the debtor risk evaluation for lending decision-making.

47. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one debt instrument.

48. The method of claim 37, further including using the debtor risk evaluation to evaluate a pool of debt instruments.

49. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one loan.

50. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one mortgage.

51. The method of claim 37, further including using the debtor risk evaluation to evaluate a pool of mortgages.

52. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one home mortgage.

53. The method of claim 37, further including using the debtor risk evaluation to evaluate a home-equity line of credit.

54. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one credit card.

55. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one credit card balance transfer.

56. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one balance transfer.

57. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one asset-backed loan.

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58. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one term loan.

59. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one automobile loan.

60. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one debt instrument.

61. The method of claim 60, further including having at least one said debt instrument pertain to at least one consumer mortgage.

62. The method of claim 60, further including having at least one said debt instrument pertain to at least one home equity loan.

63. The method of claim 60, further including having at least one said debt instrument pertain to at least one vehicle loan.

64. The method of claim 60, further including having at least one said debt instrument pertain to at least one vehicle lease.

65. The method of claim 60, further including having at least one said debt instrument pertain to at least one student loan.

66. The method of claim 60, further including having at least one said debt instrument pertain to at least one insurance policy.

67. The method of claim 60, further including having at least one said debt instrument pertain to at least one life insurance policy.

68. The method of claim 60, further including having at least one said debt instrument pertain to at least one commercial mortgage.

69. The method of claim 60, further including having at least one said debt instrument pertain to at least one consumer or commercial loan.

70. The method of claim 60, further including having at least one said debt instrument pertain to at least one asset-backed loan.

71. The method of claim 60, further including having at least one said debt instrument pertain to at least one consumer or commercial lease.

72. The method of claim 60, further including having at least one said debt instrument pertain to at least one credit card account.

73. The method of claim 60, further including having at least one said debt instrument pertain to at least one credit card balance transfer.

74. The method of claim 60, further including having at least one said debt instrument pertain to at least one debt consolidation loan.

75. The method of claim 60, further including having at least one said debt instrument pertain to at least one mortgage-backed security.

76. The method of claim 60, further including having at least one said debt instrument pertain to at least one servicing contract that performs financially based on cash flow.

77. The method of claim 60, further including having at least one said debt instrument pertain to at least one lending transaction.

78. The method of claim 60, further including having at least one said debt instrument pertain to at least one financial instrument that has a value that depends on a consumer's actions over time.

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79. The method of claim 60, further including having at least one said debt instrument pertain to at least one lending transaction.

80. The method of claim 60, further including having at least one said debt instrument pertain to at least one financial instrument that has a value that depends on a consumer's actions over time.

81. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one lending transaction.

82. The method of claim 37, further including using the debtor risk evaluation to evaluate at least one financial instrument that has a value that depends on a consumer's actions over time.

83. The method of claim 60, further including having at least one said debt instrument pertain to a financial instrument and including evaluating a portfolio in which said financial instrument is packaged based on a analysis of a plurality of financial instruments within said portfolio based on a prepayment score associated with each of them.

84. The method of claim 83, further including evaluating the value of said financial instrument and said portfolio based on said prepayment scores.

85. The method of claim 83, further including evaluating the risk associated with said financial instrument and said portfolio based on said prepayment scores.

86. The method of claim 83, further including evaluating the pricing associated with said financial instrument and said portfolio based on said prepayment scores.

87. The method of claim 37, further including using said debtor risk evaluation to price an original loan by a loan originator.

88. The method of claim 37, further including using said debtor risk evaluation to select intermediaries to borrowers.

89. The method of claim 37, further including using said debtor risk evaluation to select brokers.

90. The method of claim 37, further including using said debtor risk evaluation to facilitate marketing investments.

91. The method of claim 37, further using said debtor risk evaluation to identify individual consumers who exhibit preferred prepayment behavior.

92. The method of claim 37, further including using said debtor risk evaluation to identify groups of consumers who exhibit preferred prepayment behavior.

93. The method of claim 37, further including using said debtor risk evaluation in investment lead generation.

94. The method of claim 37, further including using said debtor risk evaluation in third-party data acquisition.

95. The method of claim 37, further including using said debtor risk evaluation in yield spread calculations.

96. The method of claim 37, further including using said debtor risk evaluation in asset liability management in which a portfolio is selected to include at least some debt instruments with certain prepayment propensities.

97. The method of claim 37, further including using said debtor risk evaluation in the valuation of existing debt instrument blocks of business.

98. The method of claim 37, further including using said debtor risk evaluation in the valuation of existing debt instrument blocks of business.

99. The method of claim 37, further including using said debtor risk evaluation in the valuation of existing mortgage blocks of business.

100. The method of claim 99, further including using said debtor risk evaluation by investors.

101. The method of claim 100, further including using said debtor risk evaluation to make investment decisions based upon quantified debt instrument prepayment behavior risk for lending institutions in which investors may invest.

102. The method of claim 100, further including using said debtor risk evaluation to evaluate the relative stability of securities that are backed by individual debt instruments.

103. The method of claim 102, further including having said securities include mortgage securities.

104. The method of claim 37, further including using said debtor risk evaluation by managers.

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105. The method of claim 37, further including using said debtor risk evaluation by auditors.

106. The method of claim 104, further including applying said debtor risk evaluations to measure prepayment risk so as to reduce auditor exposure to claw-back write-downs.

107. The method of claim 37, further including using said debtor risk evaluation by regulators.

108. The method of claim 107, further including using said debtor risk evaluation to quantify balance sheet risk resulting from expected consumer prepayment behavior so as to more precisely measure and align minimum bank capital levels.

109. The method of claim 37, further including using said debtor risk evaluation by a credit rating agency.

110. The method of claim 109, further including using said debtor risk evaluation to score prepayment risk in rating a lender's creditworthiness.

111. The method of claim 37, further including using said debtor risk evaluation by investment bankers.

112. The method of claim 111, further including using said debtor risk evaluation to quantitatively measure balance sheet risk.

113. The method of claim 112, further including providing said balance sheet risk from a target banking or mortgage company.

114. The method of claim 37, further including using said debtor risk evaluation for securitization.

115. The method of claim 114, further including having said securitization involve pools of debt instruments purchased and re-sold as reconstituted securities.

116. The method of claim 115, further including having said debt instruments include mortgages.

117. The method of claim 37, further including using said debtor risk evaluation to facilitate asset-liability risk assessment.

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118. The method of claim 37, further including using said debtor risk evaluation as part of a merger appraisal.

119. The method of claim 37, further including using said debtor risk evaluation as part of an acquisition appraisal.

120. The method of claim 37, wherein said calculating a prepayment score includes calculating a prepayment score at a granular or individual level.

121. The method of claim 37, wherein said calculating a prepayment score includes calculating a prepayment score at a pool or block level.

122. The method of claim 37, further including analyzing the demographics associated with a particular borrower to determine both the individual and group based prepayment propensity.

123. A system for determining prepayment scores representative of prepayment propensity of consumers, comprising:

 a communication server connected to a network for receiving transmitted consumer loan application information;

 an application parser connected to the communications server for receiving the transmitted consumer loan application information from the communications

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server and parsing the information into loan information and applicant information; a prepayment model library database comprising loan prepayment models connected to the application parser for receiving the loan information and fitting the loan information into the loan prepayment models and for transmitting loan prepayment models that match the loan information;

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a prepayment calculation server comprising a prepayment score generation model connected to the prepayment model library database for receiving the loan prepayment models and calculating prepayment scores for each consumer based upon the loan prepayment model and the prepayment score generation model; and means for transmitting the prepayments scores for the evaluation of risk.

124. A system for determining prepayment scores representative of prepayment propensity of consumers for the intended use of consumer mortgage loan originations, comprising:

a communication server connected to a network for receiving transmitted consumer mortgage loan application information;

an application parser connected to the communications server for receiving the transmitted consumer mortgage loan application information from the communications server and parsing the information into loan information and applicant information;

a prepayment model library database comprising loan prepayment models connected to the application parser for receiving the loan information and fitting the

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loan information into the loan prepayment models and for transmitting loan prepayment models that match the loan information; and a prepayment calculation server comprising a prepayment score generation model connected to the prepayment model library database for receiving the loan prepayment models and calculating prepayment scores for each consumer based upon the loan prepayment model and the prepayment score generation model.

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125. The system of claim 124, wherein said system determines prepayment scores representative of prepayment propensity of consumers of mortgage loans.

126. The system of claim 124, wherein the prepayment score is calculated from the formula:

$$\text{Score} = \sum_T \text{TP}(T)$$

where T represents time and P represents prepayment.

127. The system of claim 124, wherein a plurality of loan origination terminals are adapted to use the prepayment scores to adjust terms of the consumer mortgage loans.

128. The system of claim 124, further including means for receiving said prepayment scores for the valuation of existing portfolios of debt instruments.

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129. The system of claim 124, further including means for receiving said prepayment scores for the risk management of an institution that holds debt instruments.

130. The system of claim 124, wherein said applicant information includes borrower demographic information.

131. The system of claim 124, wherein said system determines both individual and group based prepayment propensity.

132. The system of claim 124, where the prepayment model library database further comprises:

a model training server for creating the loan prepayment models for the prepayment model library database; and

prepayment historical data connected to the model training server, the prepayment historical data further comprises prepayment statistics regarding loans of various types.

133. The system for determining prepayment scores of claim 124, where the prepayment calculation server further comprises an econometric model that generates Low Discrepancy Sequence (LDS)-based scenarios of econometric parameters for input to the prepayment calculation server.

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134. The system for determining prepayment scores of claim 124, where total prepayment at time T is calculated from the formula:

$$P(T) = (1/S) \sum_{s=1}^S P_s(T)$$

where S represents the number of scenarios and P represents the prepayment amount for a given scenario.

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135. The system for determining prepayment scores of claim 134, where the total prepayment, accumulated by time, in scenario s is calculated from the formula:

$$P_s(T) = \prod_i p_s(t_i)$$

where p(t) is a prepayment value.

136. The system for determining prepayment scores of claim 135, where the prepayment value in a given scenario is calculated from the formula:

$$p_s(t) = R(A, L, E_s(t))$$

where A is the applicant's data, L is the loan parameters, and R is an analytical prepayment model.

137. A method for determining prepayment scores representative of prepayment propensity of loan applicants comprising:

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collecting loan and applicant information;
transmitting the loan and applicant information over a network;
calculating applicant prepayment scores,
where each prepayment score is calculated based on the formula:

$$Score = \sum_T TP(T)$$

where T represents time and P represents prepayment;
transmitting the prepayment scores over a network; and
evaluating risk based at least in part upon said prepayment scores.

138. The method of claim 137, further including calculating said applicant prepayment scores for individual applicants.

139. A method for producing a prepayment score signal product representative of consumer prepayment propensity, comprising:

collecting consumer demographic information;
calculating applicant prepayment scores, based at least in part upon said demographic information, with a computer,
where each prepayment score is calculated based on the formula:

$$Score = \sum_T TP(T)$$

where T represents time and P represents prepayment;
transmitting an electronic signal product via a communication medium over
a network representing a prepayment score.

140. A method for determining prepayment scores representative of prepayment propensity of applicants, comprising:

calculating a prepayment score for one or more applicant using a computer,
where the prepayment score is calculated from the formula:

$$\text{Score} = \sum_T TP(T)$$

where T represents time and P represents prepayment;
transmitting the prepayment scores over a network; and
evaluating risk based at least in part upon said prepayment scores.

141. The method for determining prepayment scores of claim 140, further including parsing off loan information and applicant information from applications submitted by applicants.

142. The method for determining prepayment scores of claim 141, further comprising providing the applicant information to a prepayment model library database and the loan information to a prepayment calculation server.

143. The method for determining prepayment scores of claim 142, further comprising the prepayment model library determining the prepayment model that best applies to the loan information and providing that prepayment model to the prepayment calculation server.

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144. The method for determining prepayment scores of claim 143, further comprising the prepayment calculation server receiving a prepayment model and an econometric model, where the prepayment calculation server further calculates a prepayment score for at least one applicant.

145. The method for determining prepayment scores of claim 144, where the total prepayment at time T is calculated from the formula:

$$P(T) = (1/S) \sum_{s=1}^S P_s(T)$$

where S represents the number of scenarios and P represents the prepayment amount for a given scenario.

146. The method for determining prepayment scores of claim 145, where the total prepayment, accumulated by time, in scenario s is calculated from the formula:

$$P_s(T) = \prod_i p_s(t_i)$$

where $p(t)$ is a prepayment value.

147. The method for determining prepayment scores of claim 146, where the prepayment value in a given scenario is calculated from the formula:

$$p_s(t) = R(A, L, E_s(t))$$

where A is the applicant's data, L is the loan parameters, and R is an analytical prepayment model.

148. The method for determining prepayment scores of claim 140, further including having a loan applied for include a bank loan.

149. The method for determining prepayment scores of claim 140, further including having a loan applied for relate to a credit card.

150. The method for determining prepayment scores of claim 140, further including having a loan applied for include a debt instrument for an investor.

151. The method for determining prepayment scores of claim 140, further including using said score to assess the value of a debt instrument.

152. The method of claim 151, further including using said score to assess the value of a debt instrument by an investor.

153. The method of claim 140, further including using said score to price debt instruments.

154. The method of claim 140, further including using said score in the valuation of existing portfolios of debt instruments.

155. The method of claim 140, further including using said score in the risk management of an institution that holds debt instruments.

156. The method of claim 140, further including using said score in the monitoring of brokers by scoring broker prepayment behavior.